

EXHIBIT 5
PART 2

The Patentee argues that the restriction device, in this case a ball, is permanently located within the inner tubular member, and that this arrangement, in concert with other components, prohibits the flow of fluid through the inner tubular member in either direction. Specifically, the Patentee claims:

[T]he closely fitting ball 10 and inner tubular member 9 and stops are apparently intentionally designed to block and/or frustrate two-way fluid flow through the tool Moreover, the device . . . includes additional fluid restrictive elements mounted therein such as elements [sic] 3 and items [sic] 13. It should also be noted that the ball 10 is a captive ball as described in the title and could not be dropped from the surface . . . because of the same radially inwardly extending shoulder provided at the top of the inner tubular member . . . and/or because of element 3.

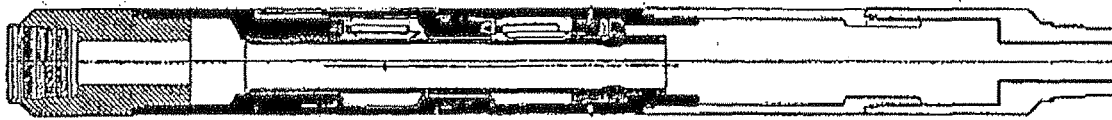
Id. at 8.

Again, the Patentee's statements are in unsupported and self-serving. The ball is not trapped within the inner tubular as the Patentee suggests, but rather is shown in the seated position. The tool disclosed in Prior Art Reference (4) is not a technical schematic drawn to scale—it is in a class of “Illustrative Drawings of Special Tools and Methods.” Therefore, the dimensions, clearances, and tolerances of the various components cannot be realistically ascertained. Further, the Patentee's argument negates the very purpose of the self-titled “circulating” float shoe disclosed in Prior Art Reference (4). If the flow path through the inner tubular is blocked to fluid moving toward and away from the surface, there can be no “circulation.”

With regard to the Patentee's reference to additional “fluid restrictive elements,” the numerals corresponding to those elements are not titled. The Patentee is taking the self-described “fluid restrictive elements” and “inwardly extending shoulder[s]” that are unlabeled in Prior Art Reference (4) and improperly fabricating their purpose for the Patentee's own advantage. In contrast, the statements regarding the structure and operation of the tool disclosed in Prior Art Reference (4) contained in this reexamination request are supported by expert testimony are entitled to greater deference. (*See* Ex. BB (Declaration of David G. Calvert).) Because Prior Art Reference (4) contains each and every element of claims 1–3, 5–7, 14–18, 33–41, and 43–54, these claims are anticipated and should be cancelled from the '336 patent.

4. Prior Art References (5)

Prior Art Reference (5), collectively entitled "3.500 O.D. Dual Flapper Valve" discloses an *outer tubular member (shown in green)* affixed to a tubular string, an inner tubular member (*shown in pink*) positioned within the outer tubular member and moveable between first and second positions with respect to the outer tubular member, and *two flapper valves (shown in yellow)* positioned between the inner tubular member and the outer tubular member. (Ex. CC, ¶ 23 (Declaration of Arthur Keith McNeilly).) The flapper valves are one-way valves, each one comprised of a spring-biased flapper closure element and a valve seat. (*Id.*)



The inner tubular member initially is positioned within the outer tubular member such that it simultaneously extends through both flapper valves and maintains both closure elements in an open position such that fluid may flow through the flapper valves in two directions. *Id.* The outer tubular member has an open lower end that permits fluid to flow from the wellbore into the inner tubular member during the lowering of the tubular string into the wellbore. *Id.*

In operation, the outer tubular member is attached to a tubular string and the entire apparatus is lowered into a wellbore. *Id.* at 26. Both flapper valves, located within the outer tubular member, are held in the open position behind the inner tubular member. *Id.* As the assembly is lowered, fluid from the wellbore is able to flow into the assembly through the inner tubular member. *Id.* at 27. Once the assembly is correctly positioned, the inner tubular member is removed, thereby releasing the flapper valves such that both flapper valves will pivot open in response to fluid flow away from the surface, and otherwise will remain in a closed position to prevent fluid flow toward the surface. *Id.*

Again, the Patentee, in its own reexamination request, admits that the disclosures of Prior Art Reference (5) are as follows:

[Prior Art Reference (5)] apparently disclose[s] a device having a pair of flapper valves positioned between an inner tubular member and an outer tubular member. The inner tubular member is initially positioned such that it apparently extends

through the pair of flapper valves and maintains them in an open position. The inner tubular member may be selectively moved to a second position thereby allowing the flapper valves to move to a closed position.

Patentee's Reexamination Request at 10. In spite of this admission, the Patentee claims that Prior Art Reference (5) "is non-analogous art" because "the '336 patent claims call for cementing a tubular string in position," and Prior Art Reference (5) does not disclose a cementing tool. *Id.* at 10-12.

First, of the '336 patent claims requested for reexamination herein, the Patentee's alleged "claim requirement" appears only in the preamble of independent claim 43. As explained earlier, preambles that merely recite the intended use or function of the claimed apparatus or method are not limiting claim elements. *Intirtool, Ltd. v. Texar Corp.*, 369 F.3d at 1295; *Pitney Bowes*, 182 F.3d at 1305.

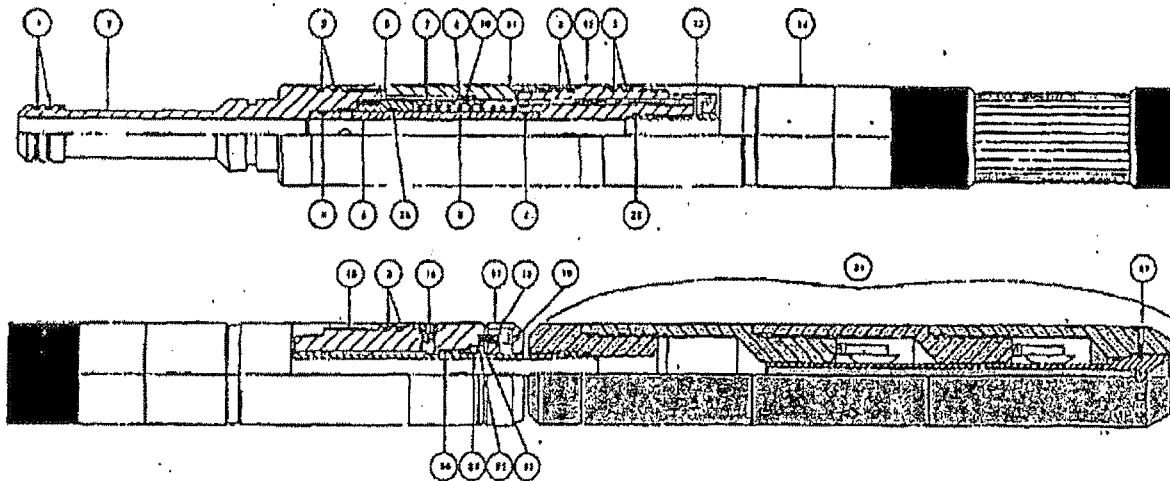
In the case of claim 43, the claim body recites a structurally complete invention. Specifically, claim 43 recites, "mounting a plurality of flapper valves . . . in a float equipment tubular . . . covering said bore of said plurality of flapper valves by extending an inner tubular through all of said flapper valves . . . running said tubular string with said float equipment tubular into the wellbore . . . and removing said inner tubular from said plurality of flapper valves." The preamble to claim 43, when viewed in relation to the structurally complete invention reproduced above, merely recites an intended *use* for the invention (i.e., "[a] method for running a tubular string . . . into a wellbore and for cementing said tubular string within said wellbore"). Accordingly, the preamble of claim 43 is not a claim limitation and thus is not properly considered in an anticipation analysis under 35 U.S.C. § 102. Rather, the proper test is whether one or more prior art references contain each and every limiting element of the claim at issue, arranged as stated in the claim. *See Sandt Tech.*, 264 F.3d at 1350. By the Patentee's own admission above, Prior Art Reference (5) contains each and every key element of the '336 patent's non-jet claims, arranged as stated in those claims. Accordingly, as detailed in the table of Section B below, claims 1-3, 5-7, 14-16, 33-41, 43-46, 48-50, and 52-53 are anticipated and should be cancelled from the '336 patent.

Second, even if the preamble is considered a claim element, *which it is not*, the tool of Prior Art Reference (5) can be utilized for spot cementing. (*See Ex. CC (Declaration of Arthur Keith McNeilly).*) This statement is supported by expert testimony and therefore is entitled to

greater deference than Patentee's statement of conjecture as to the tool's functional purpose or capability.

5. Prior Art Reference (6)

Prior Art Reference (6), entitled "2 ½" Cement Retainer Assembly," discloses a check valve sub-assembly comprising *two flapper valves (shown in yellow)* contained within an *outer tubular member (shown in green)*. An *inner tubular member (shown in pink)* extends through and covers the bore of both flapper valves to maintain the flapper valves in the open position. As illustrated, in its initial position the inner tubular member prevents the flapper valves from closing, thereby allowing fluid to flow in both directions through the bore of the inner tubular member (and therefore through the entire tubular assembly). See Ex. BB, ¶ 18.



During operation, the dual flapper valve sub-assembly is attached to a tubular work string. *Id.* at 19. Once attached, the apparatus is utilized for cementing operations. *Id.* More particularly, once the double flapper type check valve assembly is attached to the tubular work string, the entire assemblage is lowered into the wellbore. *Id.* at 20. As it is lowered, existing wellbore fluid flows inwardly into the tubular string through the inner tubular. *Id.* Because the flapper valves, when activated, permit fluid flow only in a downward direction, it is necessary to hold the flapper valves in an open position while the assembly is being lowered. *Id.*

Once lowered to the correct depth, the inner tubular member of the double flapper check valve sub-assembly is removed from contact with the two flapper valves such that the flapper

valves are activated. *Id.* at 21. The spring-activated flapper valves open in response to a flow of fluid from the surface, but remain closed in response to fluid flow toward the surface. *Id.* The inner tubular member is removed by dropping a restriction device (i.e., a ball or dart) from the surface to the inner tubular member. *Id.* at 22. Pump pressure is thereafter applied to the restriction device to remove the inner tubular member from the tool. *Id.*

As before, the Patentee, in its own reexamination request, admits that Prior Art Reference (6) discloses a device similar to the device of the '336 patent by having a pair of flapper valves positioned between an inner tubular member and an outer tubular member, the inner tubular member initially positioned such that it extends through the pair of flapper valves, and the inner tubular member selectively moveable to a second position thereby allowing the flapper valves to close. However, despite this admission, the Patentee claims the following:

[Prior Art Reference (6)] is *non-analogous art* and is not related to the problem of surge pressure and controlling fluid flow within the tubular string to be cemented to reduce surge pressure while the tubular string is lowered from the surface into a position for cementing:

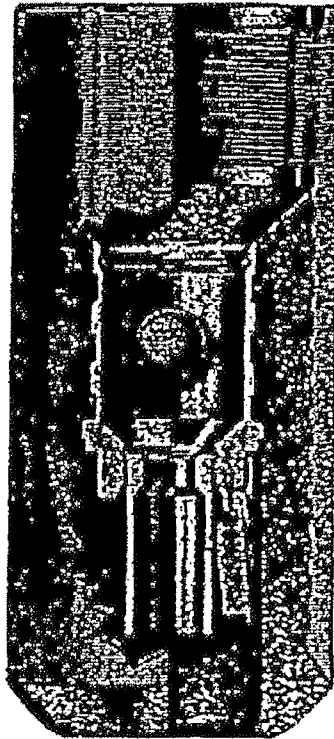
The '336 patent states in Col 1., lines 42-44 that the invention of the '336 patent is for use in well completions where it is undesirable to put excess pressure on the wellbore caused by lowering the casing into the wellbore. The device of [Prior Art Reference (6)] . . . is unlikely to cause excess pressures. . . . [and] is not utilized when lowering the tubular string to be cemented.

Patentee's Reexamination Request at 15.

Again, the Patentee's argument is misplaced. Claims 1-7, 14-18, and 33-54 of the '336 patent are claims directed to a device or method of using that device with discrete components arranged in a specific manner. Specification statements related to the alleged purpose of such a device cannot be imported into a claim in order to negate otherwise anticipatory prior art. For purposes of an anticipation analysis under 35 U.S.C. § 102, the only consideration is whether one or more prior art references contain each and every element of the claim at issue, arranged as stated in the claim. *See Sandt Tech.*, 264 F.3d at 1350. By the Patentee's own admission above, Prior Art Reference (6) contains each and every element of the '336 patent non-jet claims asserted for reexamination herein, arranged as stated in those claims. Accordingly, claims 1-3, 4-7, 14-16, 33-41, 43-46, 48-50, and 52-53 are anticipated and should be cancelled from the '336 patent.

6. Prior Art Reference (7)

In the 1990-91 edition of the *Composite Catalog of Oil Field Equipment and Services*, Trico Industries, Inc. published an advertisement entitled "B & W Orifice Shoes and Collars." The "orifice shoes and collars" disclosed in the advertisement each were comprised of a *flapper valve (shown in yellow)* contained within a *float equipment outer tubular (shown in green)* and were constructed of drillable materials. A moveable *inner tubular member (shown in pink)* extended through the bore of the flapper valve. The inner moveable member was operable for activating the flapper valve to control fluid flow through the tubular string. See Ex. BB (Declaration of David G. Calvert).



Mounted adjacent to the moveable member was a *drop member or ball (shown in blue)*. *Id.* This drop member or ball was operable in response to fluid pressure to engage the moveable member. *Id.* As described in the advertisement and with emphasis added, "[i]f required, orifice shoes and collars can be delivered with the *ball held in place* by an optionally removable spring.

If run in this 'non-circulating' mode, any high-volume circulation will immediately convert the unit to float equipment."

During operation, the orifice shoe and/or collar would have been attached to a tubular string. *Id.* Once attached, the orifice shoe and/or collar would have generally aided in lowering the tubular string from a surface position into a wellbore. *Id.*

The Patentee, in its own reexamination request, admits that Prior Art Reference (7) "apparently disclose[s] a single flapper valve positioned between an inner tubular member and an outer tubular member." However, Patentee then disingenuously asserts that, among others, claims 1 and 54 of the '336 patent contemplate "an inner tubular member initially positioned such that it simultaneously extends through *first and second or all flapper valves* and maintains *them* in an open position."

Yet neither claim 1 nor claim 54 (and none of claims 2, 3, 4, 5, and 7, which depend from claim 1, and claims 14, 15, 16, 17, and 18) requires "first and second or [multiple] flapper valves." Rather, claims 1 and 54 (as well as claims 2-5, 7, and 14-18) *each require only one valve.*

For example, claim 54, which was submitted to the PTO with Applicants' second amendment and issued without comment by the Examiner as to its patentability, requires only the following three elements: (1) **one valve**; (2) **a moveable member** operable for activating the valve for controlling fluid flow through a tubular string; and (3) **a drop member mounted adjacent** to the moveable member and operable in response to fluid pressure for engaging the moveable member. Prior Art Reference (7) was among those found by the Court at a "preliminary stage" of litigation to "at least appear[] to read on" asserted claim 54. (*See* Ex. E (Order Denying Motion for Preliminary Injunction) at 3-4.) For purposes of an anticipation analysis under 35 U.S.C. § 102, the only consideration is whether one or more prior art references contain each and every element of the claim at issue, arranged as stated in the claim. *See Sandt Tech.*, 264 F.3d at 1350. Prior Art Reference (7) contains each and every element of claim 54, arranged as stated in the claim: (1) a valve (shown in yellow), (2) a moveable member (shown in pink) that is operable for activating the valve for controlling fluid flow through a tubular string (shown in green), and (3) a drop member mounted adjacent to the moveable

member (shown in blue and specified in the text to be a “ball held in place by an optionally removable spring”).

Prior Art Reference (7) contains each and every element of claims 1, 2, 3, 4, 5, 7, 14, 15, 16, 17, 18, and 54, arranged as stated in the claims. Accordingly, claims 1-5, 7, 14-18, and 54 of the '336 patent are anticipated and should be cancelled from the '336 patent.

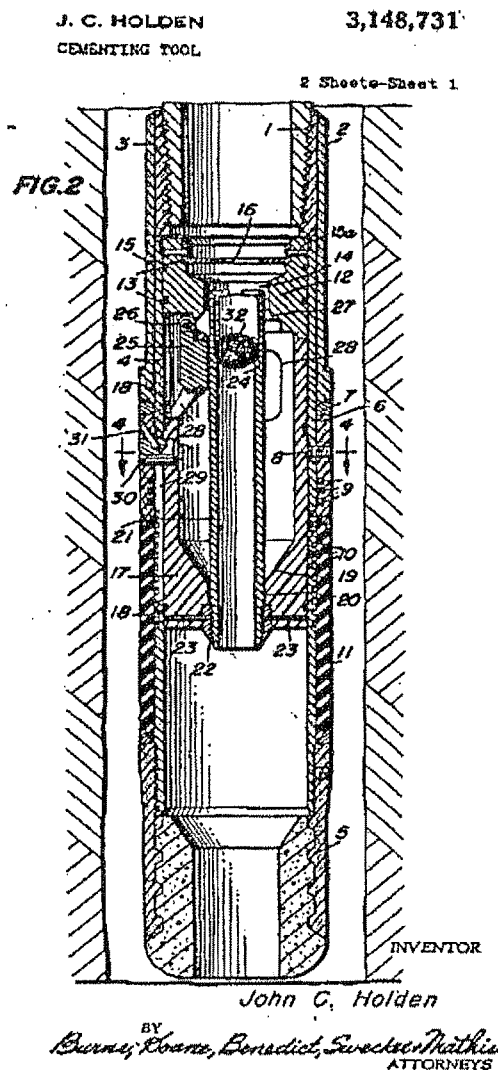
7. Prior Art Reference (8)

Prior Art Reference (8) corresponds to U.S. Patent No. 3,148,731, which discloses a cementing tool or “shoe with an automatic fill-up unit.” (Ex. Q at col. 1, ll. 9-10.) Prior Art Reference (8) was designed specifically to overcome the problem of surge pressure, or “formation damaging pressure surges,” caused by conventional “closed string” cementing shoes allowing no communication between wellbore and casing interior when casing is run in hole. *Id.* at col. 1, ll. 23-41. Specifically, Prior Art Reference (8) discloses “a cementing shoe which contains a normally open fill-up valve which permits mud to enter the casing during run-in of the casing string, but which may be selectively closed prior to a cementing step.” *Id.* at col. 1, ll. 42-46.

Prior Art Reference (8) comprises a *flapper valve (shown in yellow)* contained within an *outer tubular assembly (shown in green)*. An *inner tubular member (shown in pink)* extends through the bore of the flapper valve to block the closing of the flapper valve and maintain it in the open position. *Id.* at col. 3, ll. 51-53. The flapper valve body is constructed of drillable material, and the inner tubular member is “also of drillable plastic or aluminum.” *Id.* at col. 3, ll. 14-15, 33-34. The inner tubular member 21 initially is secured in place by *shear pins 23 (shown in purple)* to prevent the flapper valve 25 from closing.

In operation, the cementing tool disclosed in Prior Art Reference (8) generally aids in running the tubular casing string from a surface position into a wellbore, and thereafter in cementing the tubular casing string within the wellbore. More particularly, once the cement float shoe disclosed in Prior Art Reference (8) is attached to the tubular string, the entire assemblage is lowered into the wellbore. During the run-in stage, wellbore fluid may flow inwardly into the tubular string through the inner tubular member. *Id.* at col. 4, ll. 48-51. Because the flapper valve when activated permits fluid flow only in a downward direction, it is necessary to hold the

flapper valve in an open position while the assembly is being lowered, thereby allowing for two-way flow.



Once the tool is lowered to the desired depth for cementing and "fill-up is to be stopped," the inner tubular member is removed in order to release the flapper valve. *Id.* at col. 4, ll. 51-57. The flapper valve, when released or activated, will open in response to fluid flow away from the surface, and close in response to fluid flow toward the surface. To remove the inner tubular member, a ball (shown in blue) is dropped from the surface and through the tubular string to land on the valve seat 24 of the inner tubular member 21. *Id.* at col. 4, ll. 8-11. Pressure is then

applied until the fluid pressure on the ball is sufficient to shear the pins 23 and “pump the tube 21 out through the bottom of the shoe.” *Id.* at col. 4, ll. 11-17. As the inner tubular member no longer blocks the flapper valve, the flapper may close. *Id.* at col. 4, ll. 15-17. During the cementing phase, closing the flapper valve to inward fluid flow from the wellbore is necessary “to prevent the cement in the well from being pumped back into the pipe by its own hydrostatic pressure.” *Id.* at col. 4, ll. 45-47.

For purposes of an anticipation analysis under 35 U.S.C. § 102, the only consideration is whether one or more prior art references contain each and every element of the claim at issue, arranged as stated in the claim. *See Sandt Tech.*, 264 F.3d at 1350. As detailed in the table of Section B below, Prior Art Reference (8) contains each and every element of claims 1, 2, 3, 5, 7, 14, 15, and 16 of the '336 patent, arranged as stated in the claims. Accordingly, claims 1-3, 5, 7, and 14-16 of the '336 patent are anticipated and should be cancelled from the '336 patent. Additionally, under 35 U.S.C. § 103, the disclosure of Prior Art Reference (8) in view of Prior Art References (1) through (7) renders obvious claims 1-7, 14-18, and/or 33-54 of the '336 patent.

8. Prior Art Reference (9)

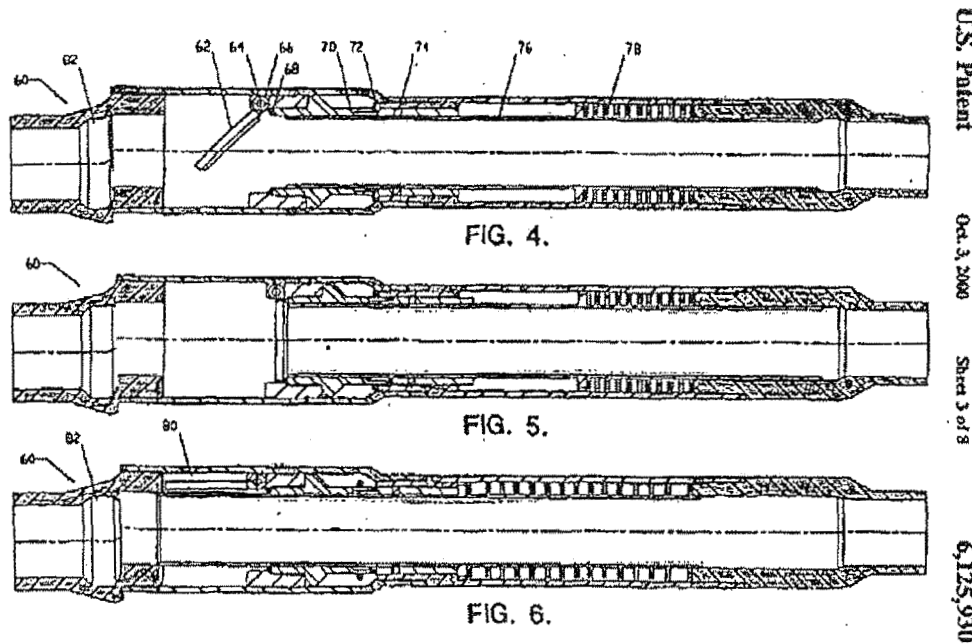
Prior Art Reference (9) corresponds to U.S. Patent No. 6,125,930, which discloses “valves [that] are normally closed but will open in response to a pressure force from below such that well fluid may flow into the [tubing string] as it is lowered into the bore.” (Ex. R at col. 1, ll. 36-39.) Specifically, Prior Art Reference (9) discloses a downhole valve comprising:

a body [*outer tubular – shown in green*] defining a flow passage;

a valve assembly mounted in the body, the valve assembly including a valve member [*flapper valve(s) – shown in yellow*] being moveable from a first configuration to a second configuration, in the first configuration the valve member preventing flow in at least one direction through the passage, and in the second configuration the valve member being retained in an open position; and

a valve member retainer [*inner tubular – shown in pink*] normally restrained in a first configuration and biased for movement to a second configuration, the retainer being held in the first configuration while the valve member is in the first configuration and being releasable from said first configuration to move the valve member to the open position and retain the valve member in the open position.

(Ex. R at col. 2, ll. 3-17.) Prior Art Reference (9) further discloses that “[w]here the valve member is in the form of *one or more flappers*, an end of the sleeve may push the flappers to the open position and then define the flow passage past the flappers.” *Id.* at col. 3, ll. 17-20 (emphasis added).



Prior Art Reference (9) discloses the essential components of the apparatus in the non-jet claims of the '336 patent. However, the described operation's sequence of events is slightly different from the operation of the valve assembly as disclosed in Prior Art Reference (9) utilizes the sequence of events depicted in FIGS. 4-5-6, whereas the '336 patent claims a reverse sequence that would correspond to FIGS. 6-5-4. With Prior Art Reference (9), the sequence is as follows: First, the inner tubular member is disengaged from the flapper valves such that the valves are closed and limit fluid flow to one direction (FIG. 4). Next, a shear member is broken and the inner tubular member is forced through the bores of the flapper valves (FIG. 5) such that the valves are thereafter held open behind the inner tubular member to allow fluid flow in two directions (FIG. 6). This sequence is essentially reversed from—but conceptually very similar to—the operation of the apparatus of the '336 patent's non-jet claims.

Notwithstanding this operational difference, Prior Art References (9) discloses each and every essential element of the apparatus claimed in the '336 patent. Accordingly, the disclosure of Prior Art Reference (9), in view of Prior Art References (1) through (7), renders claims 1-7, 14-18, and/or 33-54 obvious and, therefore, those claims should be cancelled from the '336 patent.

9. Prior Art Reference (10)

Prior Art Reference (10) corresponds to U.S. Patent No. 6,296,059, which discloses multiple embodiments of a reverse circulating valve assembly comprising an *outer tubular member (shown in green)* connected to a tubular string, and an *inner tubular member (shown in pink)* contained within the outer tubular member (FIGS. 1 & 4). The reverse circulation valve allows two-way fluid flow and conversion, without removal from the well, into one-way fluid flow. The inner tubular member is moveable with respect to the outer tubular member from a first position to a second position. *See, e.g.*, Ex. S at col. 3, ll. 20-24; col. 4, ll. 56-60. The movement of the inner tubular controls the flow of fluid through the tubular string by converting the valve assembly from a two-way flow mode (FIGS. 2 & 7) to a one-way flow mode (FIGS. 3 & 5).

The movement of the inner tubular member is accomplished by *dropping a ball (shown in blue)* from the surface. When the ball reaches the reverse circulating valve assembly, it lands within a ball seat (*see* FIGS. 3 and 5) formed into the inner tubular member. Fluid pressure acts on the ball to move the inner tubular member from a first position to a second position, thereby manipulating the flow of fluid through the tubular string. *Id.* at col. 5, ll. 27-30.

To manipulate fluid flow, the sleeve is moveable to close a first fluid passageway and to open a second fluid passageway, thereby to convert from two-way to one-way flow. (*See* FIGS. 7 and 5.) *One-way valve or valves, for example float valve(s), (shown in yellow)* sit in the second fluid passageway and permit flow in only one direction through the second fluid passageway. (*Id.* at col. 3, ll. 1-5.) In the embodiment depicted in Figures 5 and 7, the valves sit between the inner tubular member and outer tubular member and are insulated from fluid flow when the inner tubular member is in the first position.

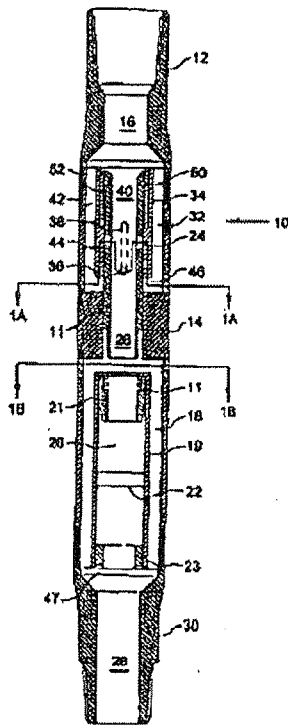


FIG. 1

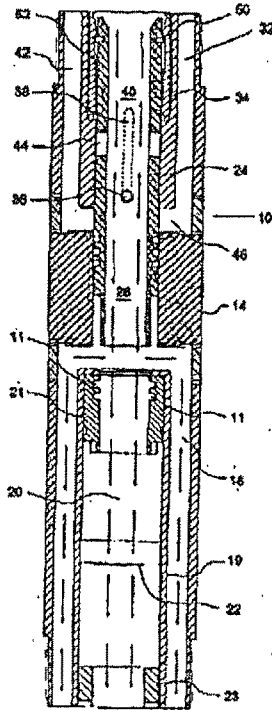


FIG. 2

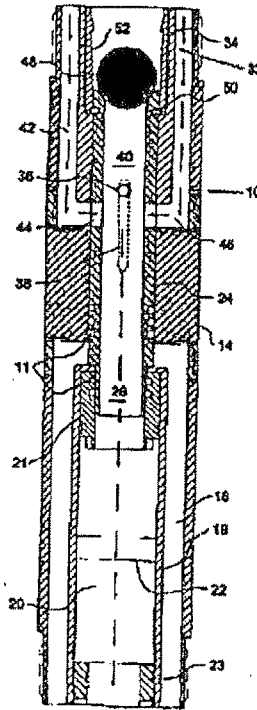


FIG. 3

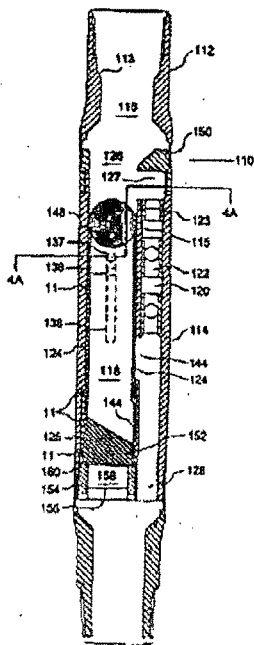


FIG. 4

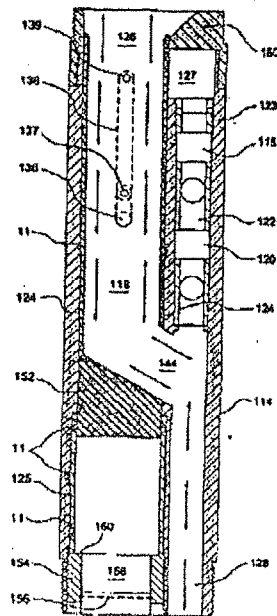


FIG. 7

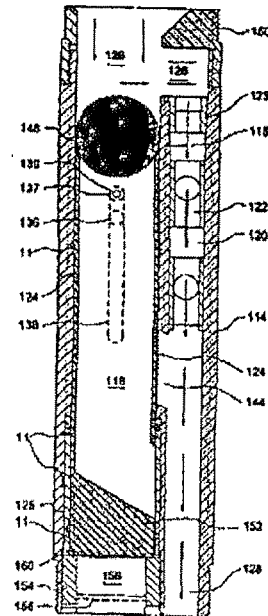


FIG. 5

For purposes of an anticipation analysis under 35 U.S.C. § 102, the only consideration is whether one or more prior art references contain each and every element of the claim at issue, arranged as stated in the claim. *See Sandt Tech.*, 264 F.3d at 1350. As detailed in the table of Section B below, Prior Art Reference (10) contains each and every element of claims 1, 2, 3, 4, 5, and 6 of the '336 patent, arranged as stated in the claims. Accordingly, claims 1-6 of the '336 patent are anticipated and should be cancelled from the '336 patent. Additionally, under 35 U.S.C. § 103, the disclosure of Prior Art Reference (10) in view of Prior Art References (1) through (7) renders claims 1-7, 14-18, and/or 33-54 obvious and, therefore, those claims should be cancelled from the '336 patent.

10. Prior Art References (11) and (12)

Prior Art References (11) and (12) correspond to U.S. Patent No. 6,390,200 and U.S. Patent No. 6,467,546, respectively. Both patents are entitled "Drop Ball Sub and System of Use" and both list Jerry Allamon and Kenneth Waggener as inventors. Jerry Allamon is also one of the named inventors of the '336 patent. A comparison of the Patentee's requests for reexamination of the '336 patent and of the parent '824 patent reveal several apparent discrepancies in Patentee's stated position regarding what is disclosed in Prior Art References (11) and (12):

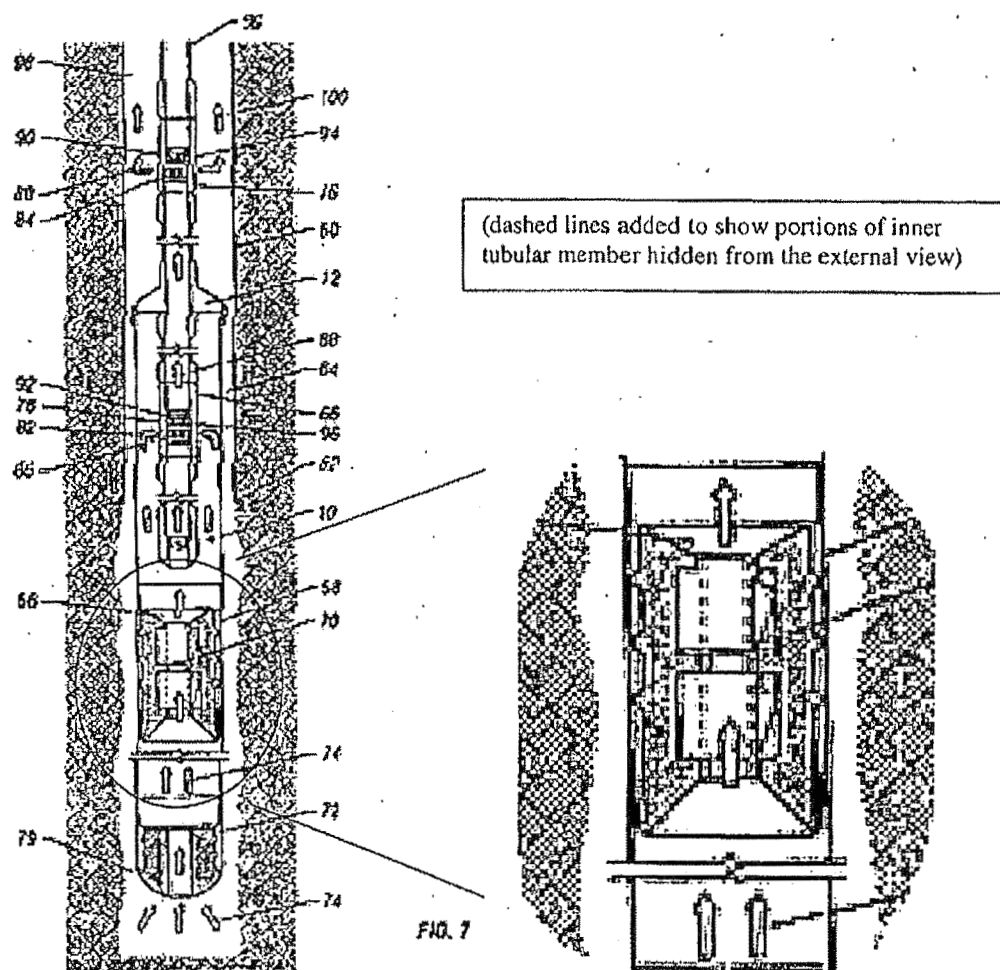
'824 patent reexamination request at 18-19	'336 patent reexamination request at 13-14
"[Prior Art References (11) and (12)] . . . discloses [sic] a device . . . having a dual flapper valve <i>positioned between an inner tubular member and an outer tubular member.</i> "	"[Prior Art References (11) and (12)] . . . disclose a device having a dual flapper valve."
"[Prior Art References (11) and (12)] do not disclose that the inner tubular member is initially positioned such that it . . . extends through the pair of flapper valves and maintains them in an open position."	"[Prior Art References (11) and (12)] do not disclose that the inner tubular member is initially positioned such that it . . . extends through first and second or all of the flapper valves to maintain them in an open position."
"[Prior Art References (11) and (12)] do not disclose that the inner tubular member may be selectively moved to a second position thereby allowing the flapper valves to move to a closed position."	"[Prior Art References (11) and (12)] do not disclose that the inner tubular member may be selectively moved to a second position thereby allowing the flapper valves to move to a closed position."
N/A	"[Prior Art References (11) and (12)] <i>do not actually show an inner tubular at all.</i> "

As between conflicting statements in Patentee's '336 and '824 reexamination requests, which Patentee filed concurrently, the '824 patent reexamination request has it right: Prior Art References (11) and (12) disclose "a device having . . . dual flapper valve[s] *positioned between an inner tubular member and an outer tubular member.*" However, contrary to the other statements of Patentee's reexamination requests, Prior Art References (11) and (12) *do* in fact disclose that the inner tubular member "is initially positioned such that it extends through [both] flapper valves and maintains them in an open position," and *do* "actually show an inner tubular," as demonstrated below.

First, Figure 7 of both patent references shows an inner tubular member initially positioned such that it extends through both flapper valves to maintain them in an open position. Figure 7 depicts an external view of the *dual flapper valve assemblies (shown in yellow)*, which are located within an *outer tubular member (shown in green)*. Although the draftsman did not label the inner tubular member, the *inner tubular must exist where shown in pink below*, based on Figures 7's flapper valve configuration and the indicated direction of flow. Specifically,

- The flapper valves of Figure 7 are hinged such that they would remain open (as shown) to allow fluid flow in the downward direction, but would pivot upwardly and close to prevent fluid flow in the upward direction.
- Yet the arrows of Figure 7 indicate *fluid flow is in the upward direction*. Indeed, the specification emphasizes that "[w]hile running casing liner 58 into the wellbore, flow lines 74 show the flow of fluid through the casing string . . . to thereby reduce the surge pressure," where flow lines 74 are shown in Figure 7 to enter the tubular string at bottom and proceed in an upward direction.
- Therefore, something in Figure 7 must operate to hold the flapper valves open (as shown) and prevent them from pivoting upwardly and closing in response to the fluid flow in the upward direction.

That something is, by definition, the inner tubular member.



Second, the float collar configuration depicted in Figure 7 (which is the same as that of the '336 patent) is prior art—not merely based on the February 4, 2000 priority filing date of Prior Art References (11) and (12), but also on the following statement in the shared patent specification that, even as to Prior Art References (11) and (12), this float collar configuration was prior art:

Float collar 68 may include valves 70 that are operated by large ball 22. *Float collars are known in the prior art; however, . . . the diameters of balls used to activate float collars have been limited to being smaller than the restriction in the wellbore*, and the size of the bore in float collars has likewise been limited. A float collar 68 which can be activated using a ball whose diameter is larger than the restriction, has only recently been developed The use of large ball 22

allows for larger diameter valves 70 to further reduce surge pressure and also allow debris to flow more easily.

(Ex. T at col. 8, ll. 38-52; Ex. U at col. 8, ll. 41-55 (emphasis added).) Thus the asserted point of novelty in Prior Art References (11) and (12) is not the "prior art" float collar of Figure 7, but rather activation of that float collar using a large diameter ball.

Based on the above, it is apparent that the float collar disclosed in Figure 7 and in the accompanying text of Prior Art References (11) and (12) is essentially the same device that is claimed in the '336 patent.

The large diameter ball utilized to activate the float collar of Prior Art References (11) and (12) is mounted in a drop ball sub located immediately above and adjacent to the float collar. The large diameter ball is released from the drop ball sub by operation of another, smaller diameter ball that is dropped from the surface. Upon its release, the large diameter ball breaks a release member and then seats on the drop ball receptacle of the float collar device.

As detailed in the table of Section B below, Prior Art References (11) and (12) contain each and every element of claims 1, 2, 3, 5, 6, 7, 14, 15, 16, 17, 18, 33, 34, 41, 43, 44, 49, 50, 51, 52, 53, and 54 of the '336 patent, arranged as stated in the claims. Accordingly, claims 1-3, 5-7, 14-18, 33-34, 41, 43-44, and 49-54 of the '336 patent are anticipated and should be cancelled from the '336 patent. Additionally, under 35 U.S.C. § 103, the disclosure of Prior Art References (11) and (12) in view of Prior Art References (1) through (7) renders claims 1-7, 14-18, and/or 33-54 obvious, and therefore, those claims should be cancelled from the '336 patent.

11. Prior Art Reference (13)

Prior Art Reference (13) corresponds to U.S. Patent No. 3,799,204, which discloses an equalizing means for well safety valves comprising certain novel elements as well as (1) an *outer tubular member* (shown in green) with an open lower end; (2) a *flapper valve (shown in yellow)* initially held in the open position, thereby allowing fluid flow into the tubular string; and (3) an *inner tubular member (shown in pink)*, which initially is secured in a first position such that it holds the flapper valve(s) open, and which subsequently is released for movement to a second position so as to allow the flapper valve(s) to close and thereby to prevent further fluid flow into the tubular string.

First position:
Two-way flow mode



Second position:
One-way flow mode

FIG. 3

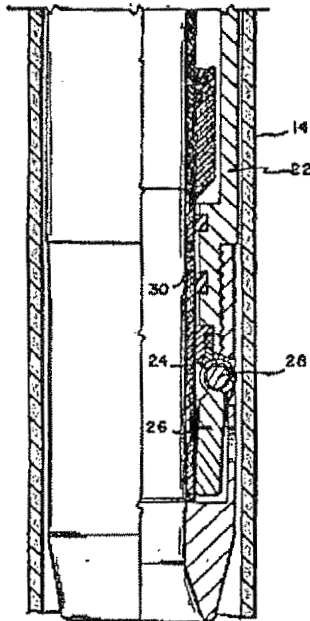
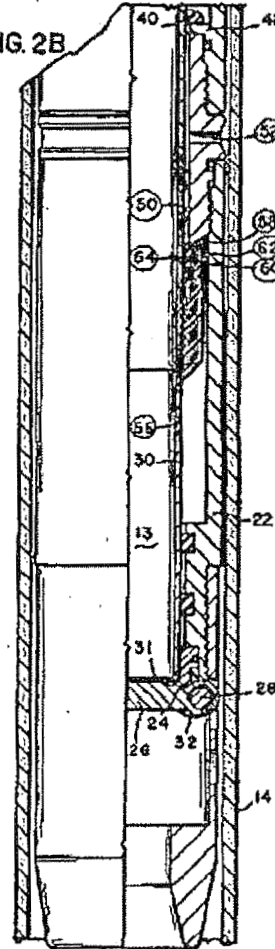


FIG. 2B



Circled items are claimed as novel; all else is disclosed in Prior Art Reference (13) as the prior art.

The "normal" configuration is for the flapper valve to be held open by the inner tubular member (FIG. 3). (Ex. V at col. 2, ll. 41-44.) The inner tubular is moveable to release and close the flapper valve and thereby block fluid inflow from the wellbore (FIG. 2B). *Id.* at col. 2, ll. 25-29, 44-47, 65-67. "The above description of one type of safety valve 10 is conventional." *Id.* at col. 3, ll. 1-2 (emphasis added).

Prior Art Reference (13) thus contains each and every element of claims 1, 2, 3, 7, 14, and 16 of the '336 patent, arranged as stated in the claims. Accordingly, claims 1-3, 7, and 14-16 of the '336 patent are anticipated and should be cancelled from the '336 patent. Additionally, the disclosure of Prior Art Reference (13), in view of Prior Art References (1) through (7), renders claims 1-7, 14-18, and/or 33-54 obvious and, therefore, those claims should be cancelled from the '336 patent.

12. Prior Art References (14) through (18)

Prior Art References (14) through (18) are provided to demonstrate the obviousness of claim 4, which depends from claim 1, in view of Prior Art References (1) through (7).

Claim 4 claims an outer tubular member that "defines one or more passageways therethrough which are blocked by said inner tubular member in said first position, said one or more passageways being opened to permit fluid flow from within said tubular string to outside of said tubular string when said inner tubular member is moved from said first position to a second position."

As demonstrated pictorially below, each of the following references discloses an outer tubular having a passageway that is

- Blocked by the inner tubular when the inner tubular is in the first position, and
- Being opened to permit fluid flow from inside the tubular string to outside the tubular string when the inner tubular is moved from first position to second position.

In all figures the outer tubular member is shown in green, the inner tubular member is shown in pink, and the passageway(s) are shown in yellow.

Prior Art Reference (14)—“Crist et al.” (Ex. W)

Prior Art Reference (14) discloses a cementing tool comprising an inner tubular member located within an outer tubular member. The outer tubular member has upper and lower ports or passageways. The inner tubular member is moveable to close the lower ports and open the upper ports for cementing.

